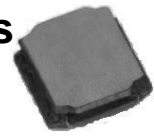


Wire Wound SMD Power Inductors—SWPA3012S Series

Operating temperature range: -25°C to +120°C (Including self-heating)



FEATURES

- Magnetic-resin shielded construction reduces buzz noise to ultra-low levels
- Metallization on Ferrite Core results in excellent shock resistance and damage-free durability
- Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI)
- 30% higher current rating than conventional inductors of equal size
- Takes up less PCB real estate and save more power

APPLICATIONS

- LED Lighting
- Next-generation mobile devices with multifunction such as adding color TV and digital movie cameras
- Flat-screen TVs, blue-ray disc recorders, set top box
- Notebooks, desktop computers, servers, graphic cards
- Portable gaming devices, personal navigation systems, personal multimedia devices
- Automotive systems
- Telecomm base stations

PRODUCT IDENTIFICATION

SWPA

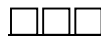
①

3012

②

S

③



④



⑤

T

⑥

①	Type
SWPA	Wire Wound SMD Power Inductor, Newly Magnetic-resin Shielded Structure

②	External Dimensions(L×H) [mm]
3012	3.0X1.2

③	Feature type
S	Standard

④	Nominal Inductance
Example	Nominal Value
1R5	1.5μH
100	10μH

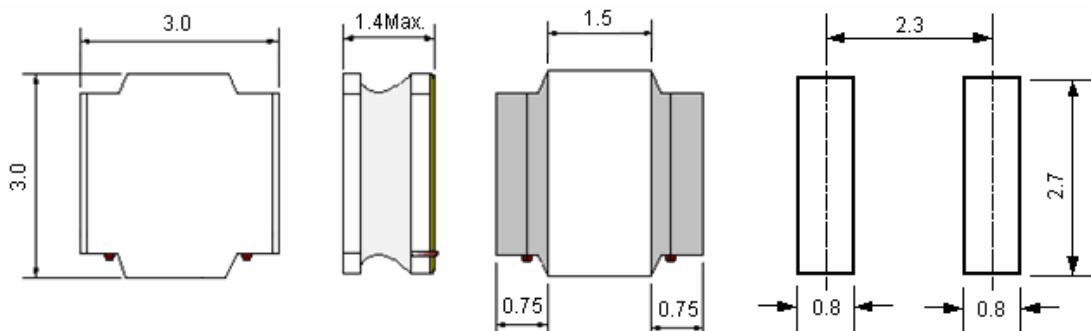
⑤	Inductance Tolerance
N	±30%
M	±20%

⑥	Packing
T	Tape Carrier Package

SHAPE AND DIMENSIONS

Unit: mm Tolerance: ±0.3

Recommended Land Pattern



Weight: 35mg

Tape and reel: 2000/7" reel, 8 mm tape width

Sunlord

Specifications subject to change without notice. Please check our website for latest information. Revised 2010/11/15

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SPECIFICATIONS

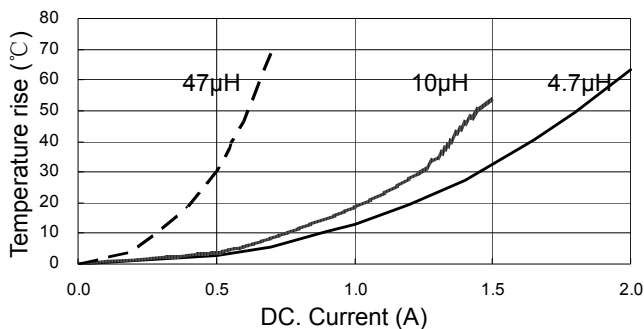
SWPA3012S Series

Part Number	Inductance @100KHz,1V	DC Resistance ($\pm 30\%$)	Min. Self-resonant Frequency	Max. Saturation Current	Max. Heat Rating Current
Units	μH	Ω	MHz	A	A
Symbol	L	DCR	SRF	Isat	Irms
SWPA3012SR82NT	0.82 $\pm 30\%$	0.030	180	2.05	2.47
SWPA3012S1R0NT	1.0 $\pm 30\%$	0.040	120	1.87	2.20
SWPA3012S1R2NT	1.2 $\pm 30\%$	0.045	120	2.22	2.01
SWPA3012S1R5NT	1.5 $\pm 30\%$	0.045	110	1.62	2.01
SWPA3012S1R8NT	1.8 $\pm 30\%$	0.055	90	1.51	1.84
SWPA3012S2R2NT	2.2 $\pm 30\%$	0.075	84	1.20	1.55
SWPA3012S2R7NT	2.7 $\pm 30\%$	0.085	65	1.14	1.48
SWPA3012S3R3MT	3.3 $\pm 20\%$	0.100	64	1.05	1.36
SWPA3012S4R7MT	4.7 $\pm 20\%$	0.120	61	0.90	1.24
SWPA3012S6R8MT	6.8 $\pm 20\%$	0.190	61	0.75	0.98
SWPA3012S100MT	10 $\pm 20\%$	0.265	42	0.60	0.83
SWPA3012S120MT	12 $\pm 20\%$	0.345	32	0.48	0.73
SWPA3012S150MT	15 $\pm 20\%$	0.360	27	0.45	0.71
SWPA3012S180MT	18 $\pm 20\%$	0.545	25	0.43	0.58
SWPA3012S220MT	22 $\pm 20\%$	0.645	23	0.42	0.53
SWPA3012S270MT	27 $\pm 20\%$	0.770	21	0.40	0.49
SWPA3012S330MT	33 $\pm 20\%$	0.875	18	0.36	0.46
SWPA3012S360MT	36 $\pm 20\%$	0.950	18	0.34	0.44
SWPA3012S390MT	39 $\pm 20\%$	1.08	18	0.30	0.41
SWPA3012S470MT	47 $\pm 20\%$	1.10	14	0.27	0.41
SWPA3012S560MT	56 $\pm 20\%$	1.38	14	0.26	0.36
SWPA3012S620MT	62 $\pm 20\%$	1.53	12	0.25	0.35
SWPA3012S680MT	68 $\pm 20\%$	1.67	12	0.24	0.33
SWPA3012S820MT	82 $\pm 20\%$	1.90	12	0.22	0.31
SWPA3012S101MT	100 $\pm 20\%$	2.86	12	0.21	0.25

- ※1. All test data is referenced to 20°C ambient;
- ※2. Rated current: Isat or Irms, whichever is smaller;
- ※*3. Isat: DC current at which the inductance drops approximate 30% from its value without current;
- ※*4. Irms: DC current that causes the temperature rise ($\Delta T = 40^\circ\text{C}$) from 20°C ambient.

TYPICAL ELECTRICAL CHARACTERISTICS

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics

